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[Intervention Review]

Contact tracing strategies in household and congregate environments to identify cases of tuberculosis in low- and moderate-incidence populations

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ABSTRACT

Background

Tuberculosis is an infectious bacterial disease that is spread via respiratory droplets from infected individuals to susceptible contacts. To eliminate this disease from low- and medium-incidence settings, people who are most likely to be infected (contacts) must be identified. Recently, study authors have examined alternate approaches to contact tracing methods that demonstrate improved detection and prioritization of contacts. The comparative benefit of these methods has not been established.

Objectives

To assess the effectiveness of novel methods of contact tracing versus current standard of care to identify latent and active cases in low- to moderate-incidence settings.

Search methods

We searched CENTRAL, MEDLINE, Embase, LILACS, Web of Science, and CINAHL up to 15 July 2019. We also searched for clinical trials and examined reference lists and conference proceedings.

Selection criteria

Randomized controlled trials (RCTs) and cluster-RCTs of contact tracing strategies that included alternate approaches (other than standard practice).

Data collection and analysis

Two review authors independently assessed identified articles for eligibility and quality using prespecified criteria.

Main results

No trials met the inclusion criteria of this review. Several study authors described an alternate method for examining contacts and performing social network analysis but did not compare this with the current contact tracing approach.

Authors' conclusions

This Cochrane Review highlights the lack of research in support of the current contact tracing method and the need for RCTs to compare new methods such as social network analysis to improve contact tracing processes.

16 September 2019

Up to date

All studies incorporated from most recent search

We performed the last search up to 15 Jul, 2019, and did not identify any trials for inclusion.

PLAIN LANGUAGE SUMMARY

Contact tracing methods for tuberculosis

What is the aim of this review?

This Cochrane Review aims to establish whether any evidence is available to support the current approach to contact tracing (the process of identifying individuals exposed to an infectious case of tuberculosis), and whether alternate options could result in a higher rate of infection detection in contacts. We searched for all relevant studies to answer this question.

Key messages

Contact tracing is an important method to further reduce the rates of tuberculosis. Cochrane Review authors identified no studies addressing this question. Therefore further research is needed to determine whether alternate contact tracing approaches could produce a greater yield in the number of contacts detected and the proportion of individuals with disease.

What was studied in the review?

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis* bacteria. Globally, tuberculosis infects an estimated 1.7 billion people, with 1.3 million deaths and 10 million new cases each year. Tuberculosis is transmitted via droplets coughed up from infected patients to susceptible contacts. The World Health Organization (WHO) aims to eliminate this disease by 2035. To achieve this ambitious task, the current decline in new cases must be at a faster rate. In high-income countries with low rates of tuberculosis, contact tracing is the primary method used to find those at risk of developing tuberculosis.

What are the main results of the review?

The review authors found that no suitable randomized controlled trials have been conducted to answer this question. There is insufficient high-certainty evidence comparing current contact tracing methods used against alternate options; further research is therefore needed.

How up-to-date is this review

We searched for studies published up to 15 July 2019.